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Structure of heme

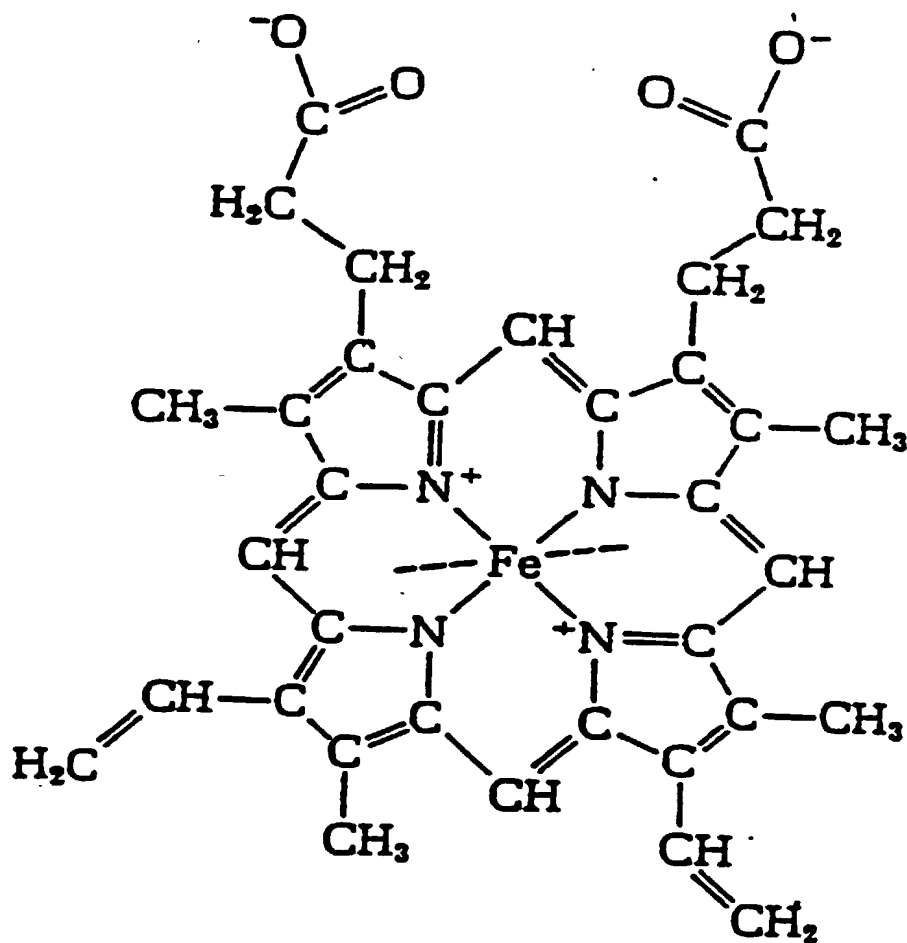


FIGURE 1

Alpha globin sequence:

1	GTG CTG TCT CCT GCC GAC AAG ACC AAC GTC AAG GGC GGC TGG GGC	45
	Val Leu Ser Pro Ala Asp Lys Thr Asn Val Lys Ala Ala Trip Gly	
46	AAG GTT GGC GCG CAC GCT GGC GAG TAT GGT GCG GAG GGC CTG GAG	90
	Lys Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu	
91	AGG ATG TTC CTG TCC GCG GAG TAT GGT GCG GAG GGC CTG GAG	135
	Arg Met Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His	
136	TTC GAC CTG AGC CAC GCG TCT GCG CAG GTT AAG GGC CAC GGC AAG	180
	Phe Asp Leu Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys	
181	AAG GTG GCG GAC GCG CTG ACC AAC GCG GTG GCG CAC GTG GAC GAC	225
	Lys Val Ala Asp Ala Leu Thr Asn Ala Val Ala His Val Asp Asp	
226	ATG CCC AAC GCG CTG TCC GCG GAG CTC AAG GAC GCG CAC GAG AAG	270
	Met Pro Asn Ala Leu Ser Ala Leu Ser Asp Leu His Ala His Lys	
271	CTT CCG GTG GAC CCG GTC AAC TTC AAG CTC CTA AGC CAC TGC CTG	315
	Leu Arg Val Asp Pro Val Asn Asn Phe Lys Leu Leu Ser His Cys Leu	
316	CTG GTG ACC CTG GCG GCG CAC CTC CCC GCG GAG TTC ACC CCT GCG	360
	Leu Val Thr Thr Leu Ala Ala His Leu Pro Ala Glu Phe Thr Pro Ala	
361	GTG CAC GCG TCC CTG GAC AAG TTC CTG GCT TCT GTG AGC ACC GTG	405
	Val His Ala Ser Leu Asp Lys Phe Leu Ala Ser Val Ser Thr Val	
406	CTG ACC TCC AAA TAC CGT	
	Leu Thr Ser Lys Tyr Arg	

FIGURE 2

1	GTG	CAC	CTG	ACT	CCT	GAG	GAG	AAG	TCT	GCC	GTT	ACT	GCC	CTG	TGG	45
	Val	His	Leu	Thr	Pro	Glu	Glu	Lys	Ser	Ala	Val	Thr	Ala	Leu	Trp	
46	GGC	AAG	GTG	AAC	GTG	GAT	GAA	GTT	GGT	GAG	GAG	GCC	CTG	GGC	AGG	90
	Gly	Lys	Val	Asn	Val	Asp	Glu	Val	Gly	Gly	Glu	Ala	Leu	Gly	Arg	
91	CTG	CTG	GTT	GTC	TAC	CCT	TGG	ACC	CAG	AGG	TTC	TTT	GAG	TCC	TTT	135
	Leu	Leu	Val	Val	Tyr	Pro	Trp	Thr	Gln	Arg	Phe	Phe	Glu	Ser	Phe	
136	GGG	GAT	CTG	TCC	ACT	CCT	GAT	GCT	GTT	ATG	GCC	AAC	CCT	AAG	GTG	180
	Gly	Asp	Leu	Ser	Thr	Pro	Asp	Ala	Val	Met	Gly	Asn	Pro	Lys	Val	
181	AAG	GCT	CAT	GGC	AAG	AAA	GTG	CTC	GGT	GCC	TTT	AGT	GAT	GGC	CTG	225
	Lys	Ala	His	Gly	Lys	Lys	Val	Leu	Gly	Ala	Phe	Ser	Asp	Gly	Leu	
226	GCT	CAC	CTG	GAC	AAC	CTC	AAG	GGC	ACC	TTT	GCC	ACA	CTG	AGT	GAG	270
	Ala	His	Leu	Asp	Asn	Leu	Lys	Gly	Thr	Phe	Ala	Thr	Leu	Ser	Glu	
271	CTG	CAC	TGT	GAC	AAG	CTG	CAC	GTG	GAT	CCT	GAG	AAC	TTC	AGG	CTC	315
	Leu	His	Cys	Asp	Lys	Leu	His	Val	Asp	Pro	Glu	Asn	Phe	Arg	Leu	
316	CTG	GGC	AAC	GTG	CTG	GTC	TGT	GTG	CTG	GCC	CAT	CAC	TTT	GCC	AAA	360
	Leu	Gly	Asn	Val	Leu	Val	Cys	Val	Leu	Ala	Ala	His	Phe	Gly	Lys	
361	GAA	TTC	ACC	CCA	CCA	GTG	CAG	GCT	GCC	TAT	CAG	AAA	GTG	GTG	GCT	405
	Glu	Phe	Thr	Pro	Pro	Val	Gln	Ala	Ala	Tyr	Gln	Lys	Val	Val	Ala	
406	GGT	GTG	GCT	AAT	GCC	CTA	GCC	CAC	AAG	TAT	CAC					
	Gly	Val	Ala	Asn	Ala	Leu	Ala	His	Lys	Tyr	His					

FIGURE 3

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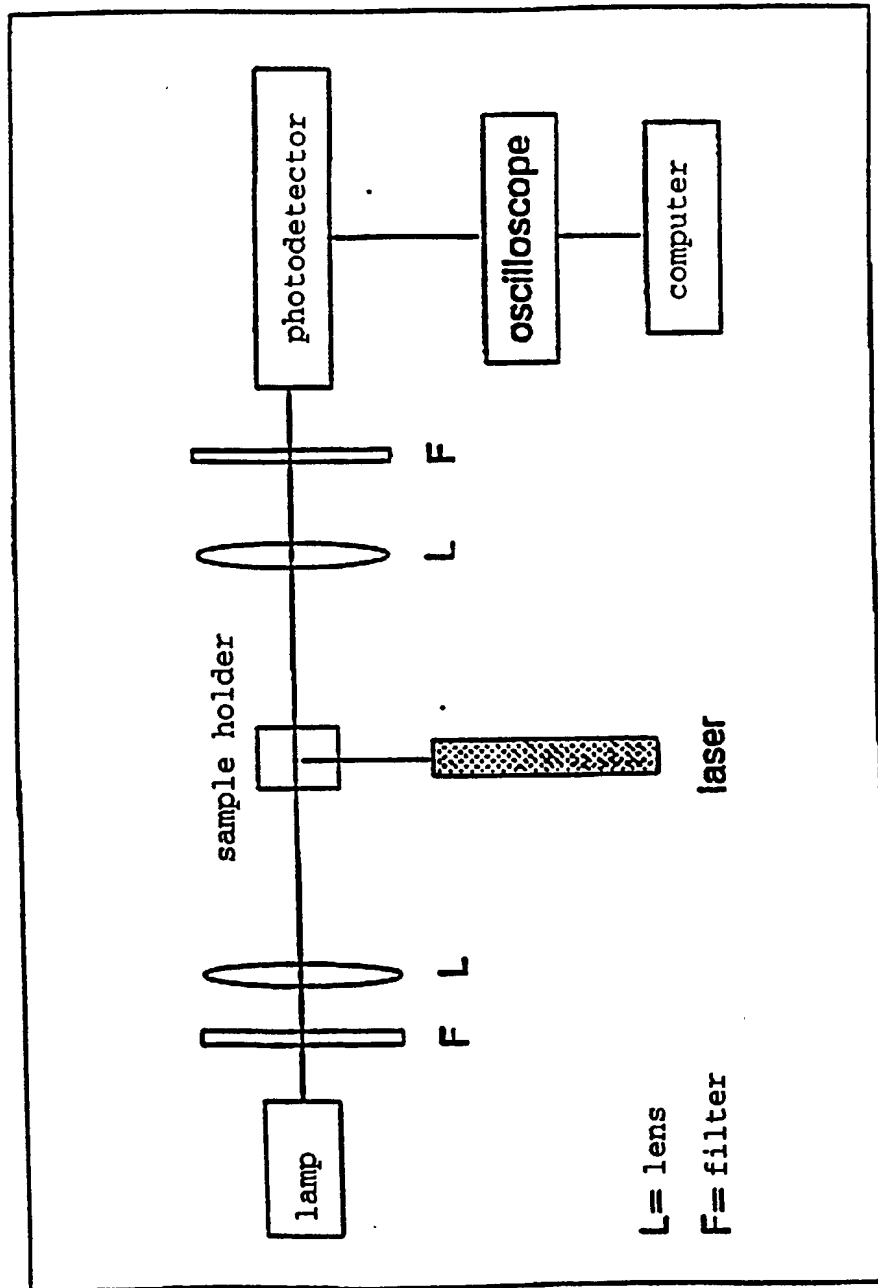


FIGURE 4

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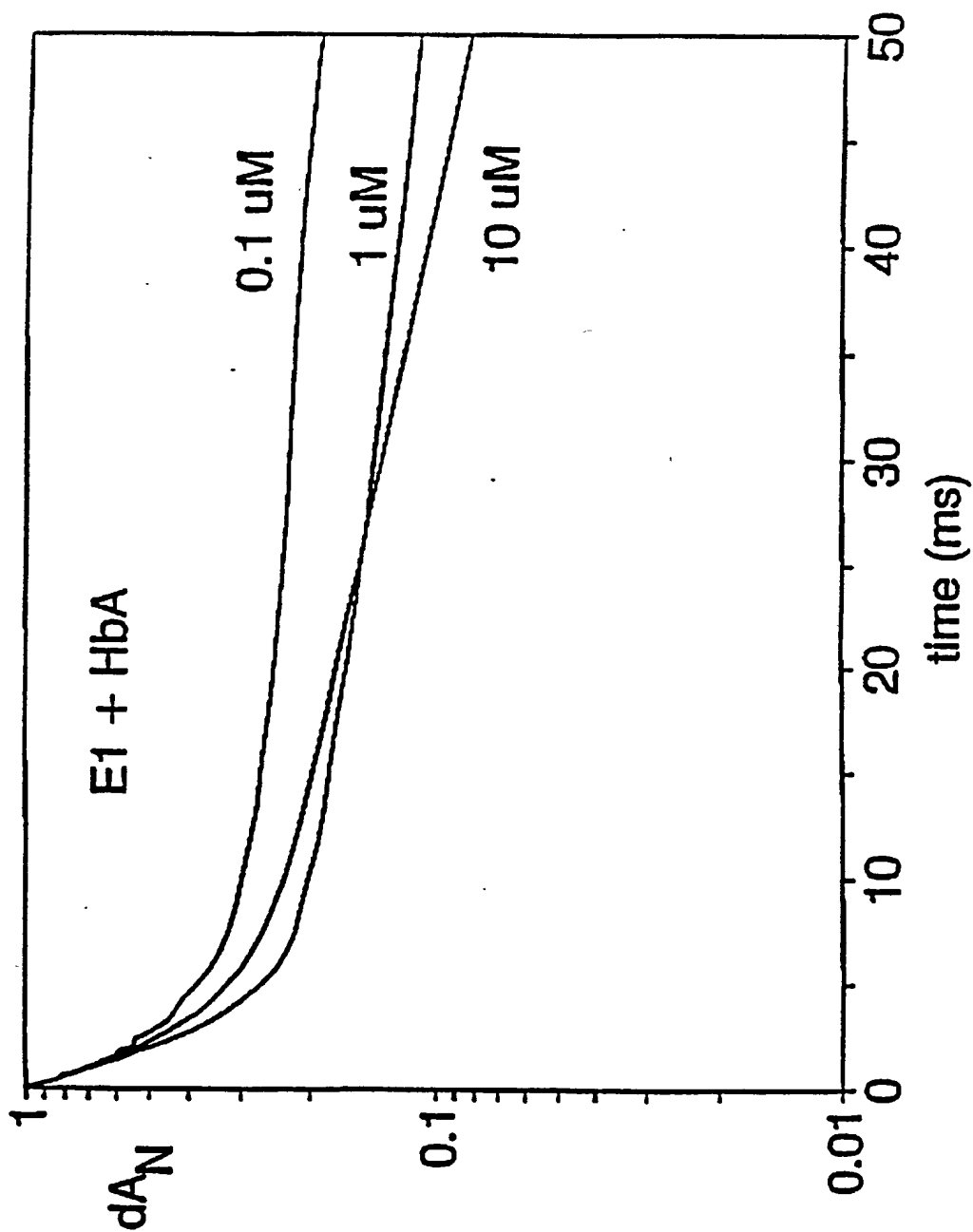


FIGURE 5

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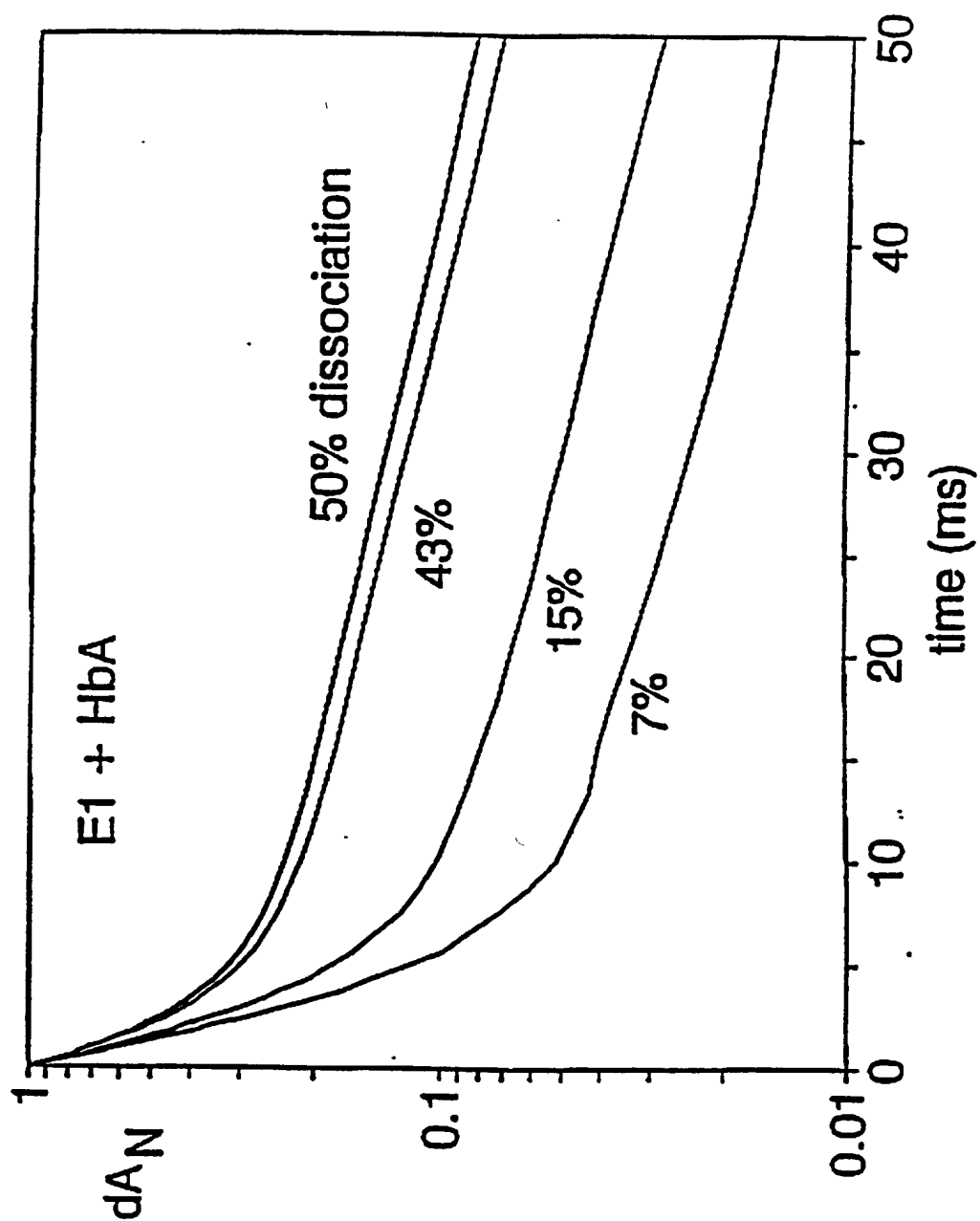


FIGURE 6

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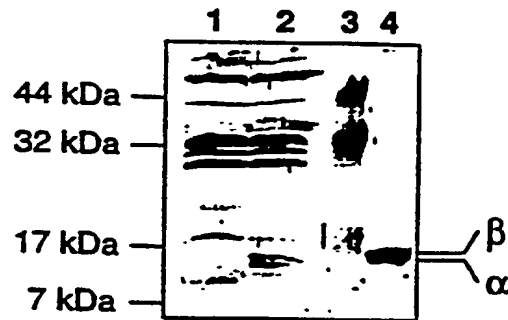


FIGURE 7

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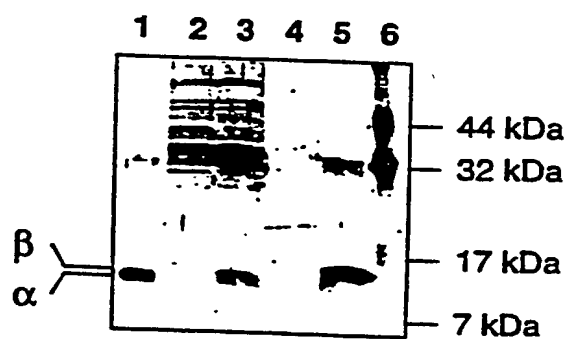


FIGURE 8

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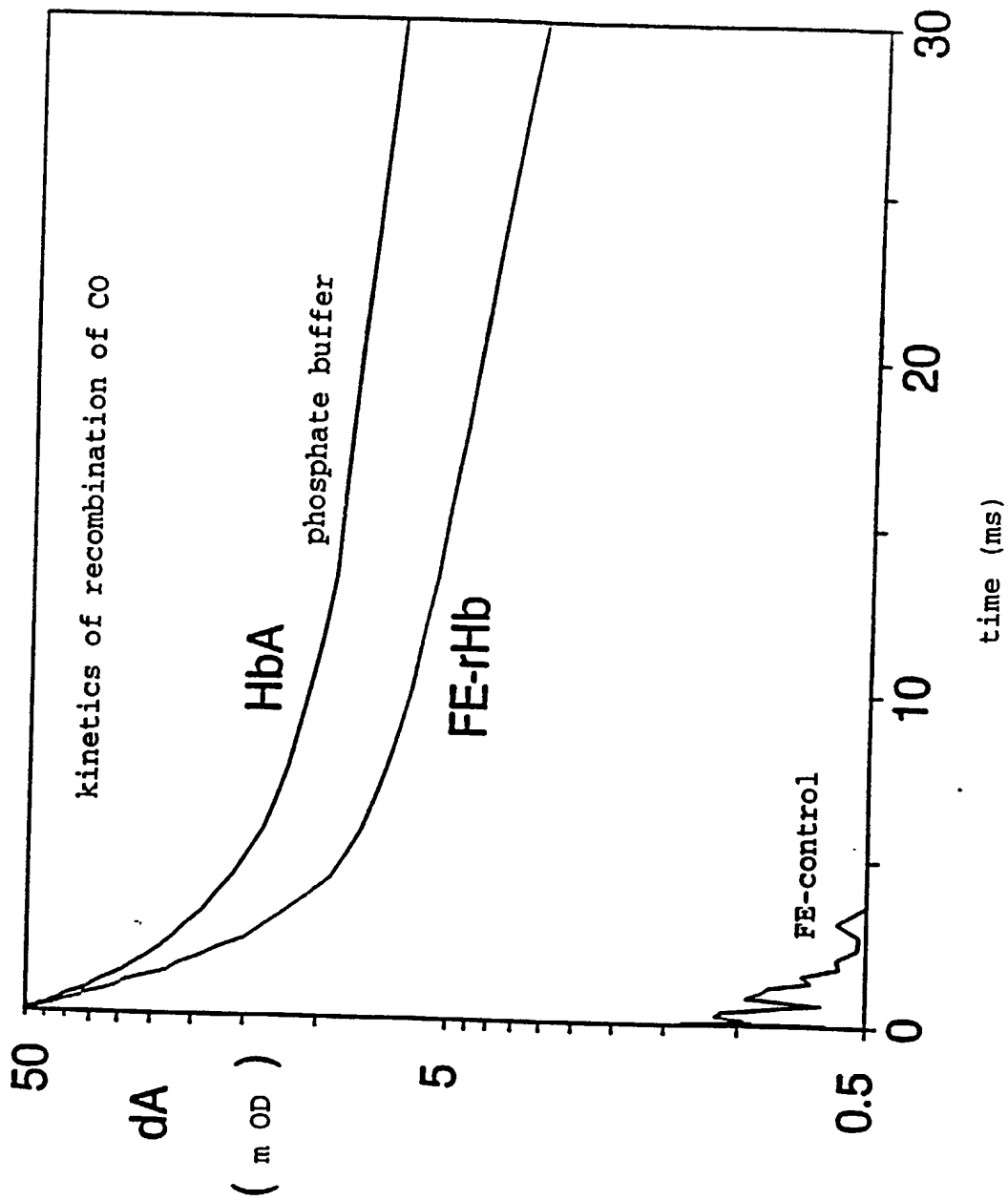


FIGURE 9

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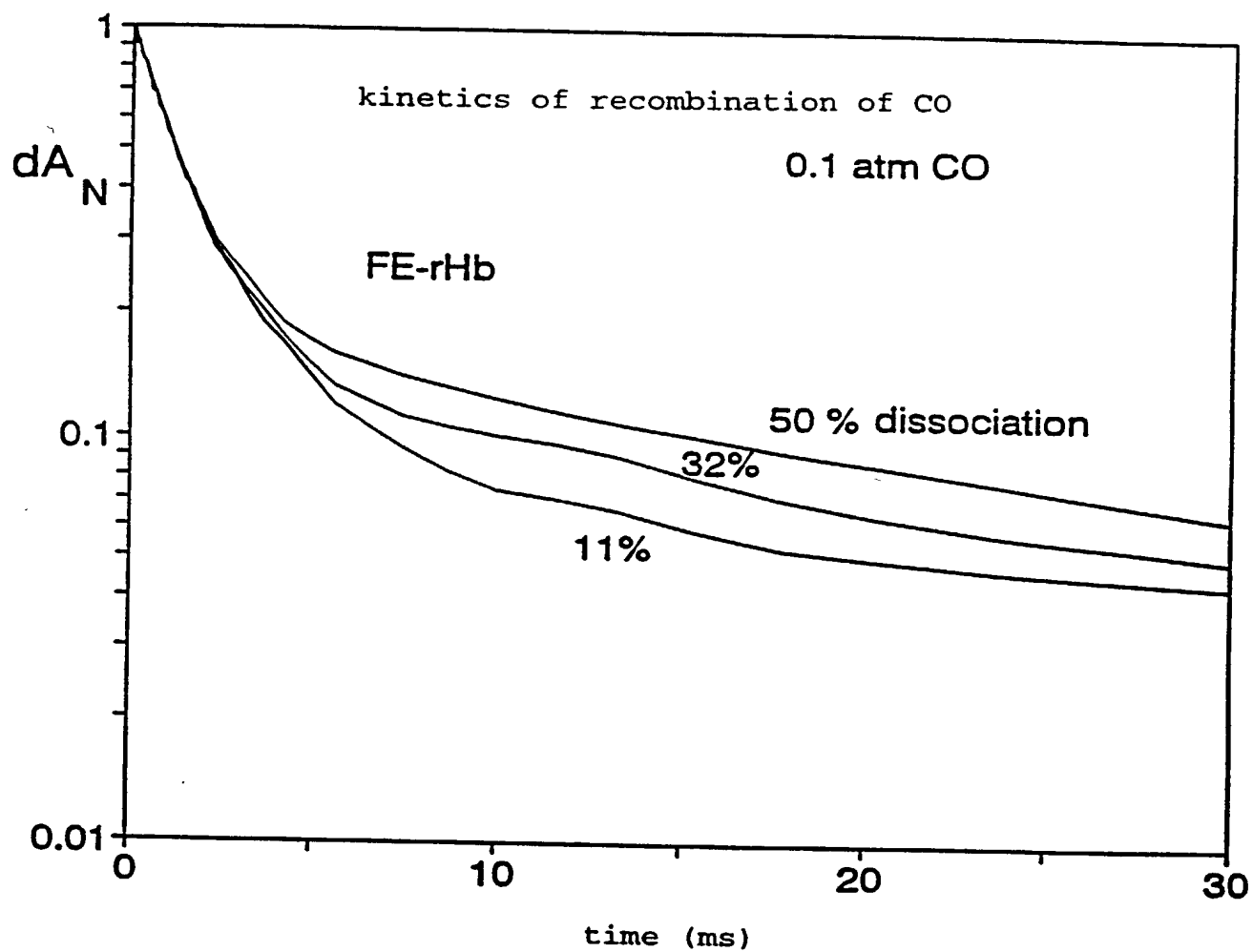


FIGURE 10

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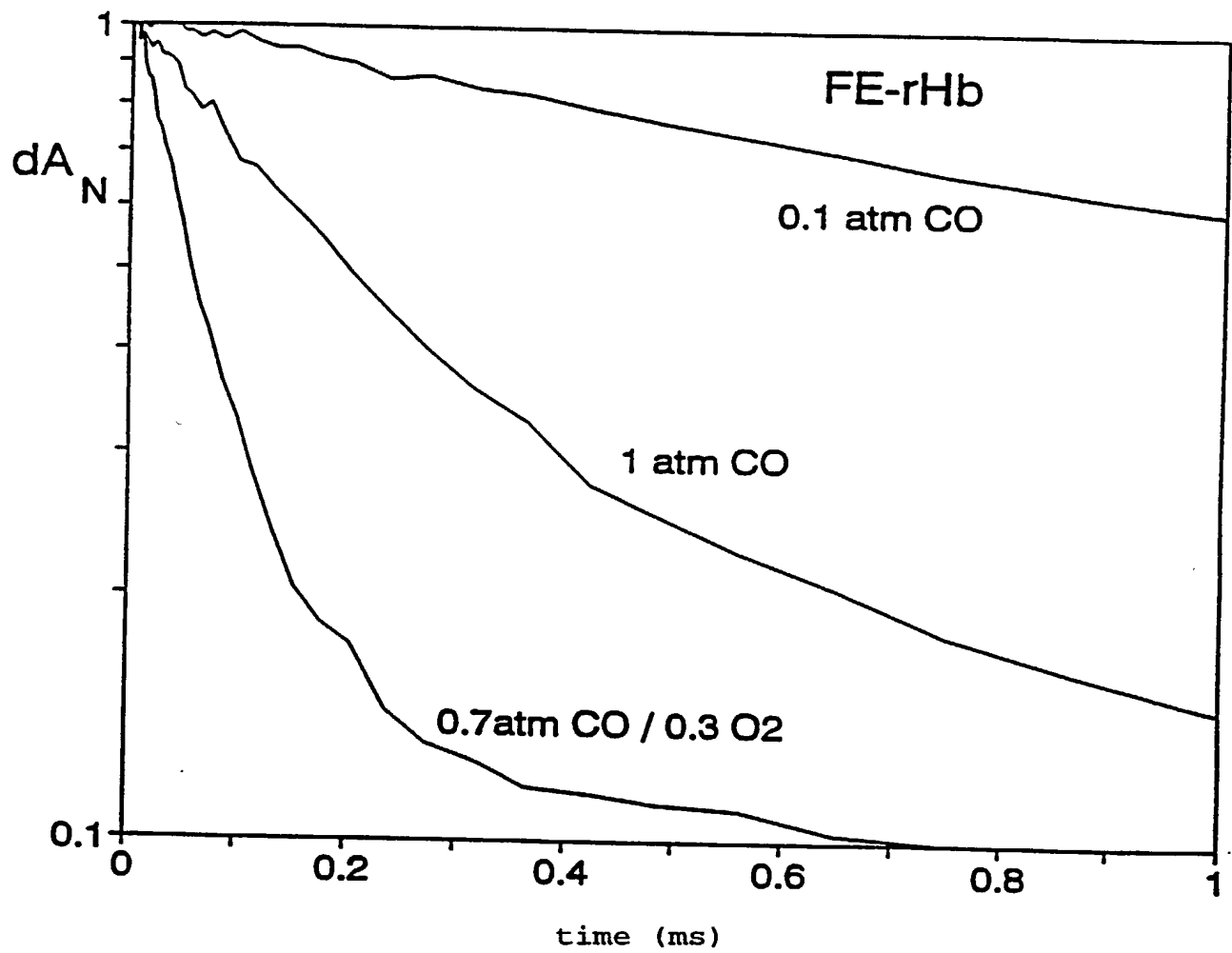


FIGURE 11